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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,788	07/31/2006	Stephan Scharfenberg	ZAHFRI P870US	1300

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EXAMINER	
KNIGHT, DEREK DOUGLAS	
ART UNIT	**PAPER NUMBER**
3655	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/587,788	SCHARFENBERG, STEPHAN	
	Examiner	Art Unit	
	DEREK D. KNIGHT	3655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11 and 15-20* is/are rejected.

7)☒ Claim(s) *12-14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 July 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/31/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 12 is objected to because of the following informalities: Line 3 states "operative connected" should be changed to --operatively connected--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 16 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16, line 2 states "engages via a spring tension". Applicant does not disclose tension springs, but rather compression style springs, therefore "spring tension" does not describe the invention. For the purposes of examination, the examiner will assume "spring tension" should be replaced with --spring force--.

Claim 17, line 1 states "spring tension". Applicant does not disclose tension springs, but rather compression style springs, therefore "spring tension" does not describe the invention. For the purposes of examination, the examiner will assume "spring tension" should be replaced with --spring force--.

Claim 17, line 2 states "at least one plate spring ***on*** at least one spiral pressure spring", emphasis added. The applicant does not disclose a plate spring on a spiral

spring, but rather shows a plate spring ***or*** a spiral spring. For the purposes of examination, the examiner will assume that "on" should be replaced with --or--.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 11, 15, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **AVITAN (US 5,128,598)** in view of **NIEMINSKI et al (US4,513,839)**.

Regarding **claim 11**, AVITAN discloses, a wheel drive for an industrial vehicle, the wheel drive comprising: a first electric prime mover (12) driving an output via at least one spur gear transmission (not shown) in a direction of a traveling mechanism connected with a drive wheel (17); a second electric prime mover (21) driving a drive shaft (case of motor 12) being coupled with the output (6) such that by rotation of the drive shaft (case of motor 12), the output (6) rotates in a direction of a steering motion; the first electric prime mover (12) and the second electric prime mover (21) being disposed co-axially with the drive shaft (case of motor 12) of the second prime mover (8).

AVITAN does not disclose a brake for braking the drive wheel, the brake being co-axial with the first and second prime movers, and the brake being located between the first prime mover and the second prime mover.

NIEMINSKI teaches a wheel drive having a first prime mover (14) arranged co-axially with a brake (28) for braking the drive wheel. When the brake of NIEMINSKI is combined with the wheel drive of AVITAN it would be located concentrically between the first and second prime movers.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the wheel drive of AVITAN such that a brake for braking the drive wheel would be located co-axially with the two prime movers and be located between the two prime movers in view of NIEMINSKI to provide a reliable means for stopping, slowing down, and holding a position of the vehicle to which the drive wheel is affixed.

Regarding **claim 15**, AVITAN discloses, a wheel drive for an industrial vehicle, wherein the first prime mover (12) and the second prime mover (21) are accommodated within a common housing (14).

AVITAN does not disclose a brake.

NIEMINSKI teaches a wheel drive having a first prime mover (14) arranged co-axially with a brake (28). Because the brake is co-axial with the drive motor, the combination of AVITAN and NIEMINSKI would result in the brake being accommodated within the housing (14) of AVITAN.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the wheel drive of AVITAN such that a brake would be located co-axially with the two prime movers in view of NIEMINSKI to provide a reliable

means for stopping, slowing down, and holding a position of the vehicle to which the drive wheel is affixed.

Regarding **claim 19**, AVITAN discloses, a wheel drive for an industrial vehicle.

AVITAN does not disclose a brake for the wheel drive, or the brake being a dry-operating disc brake, and a seal being located between the brake and the at least one spur gear transmission.

NIEMINSKI teaches a wheel drive having a brake which is a dry-operating disc brake, and a seal being located between the brake and the at least one spur gear transmission (16/17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the wheel drive of AVITAN such that a dry-operating disc brake would be connected to the drive shaft and a seal located between the brake and the at least one spur gear transmission in view of NIEMINSKI to provide a reliable means for stopping, slowing down, and holding a position of the vehicle to which the drive wheel is affixed.

Regarding **claim 20**, AVITAN discloses, a wheel drive for an industrial vehicle, wherein the first prime mover (1) has a drive shaft.

AVITAN does not disclose the drive shaft being connected with a brake via one of an engaging gear and a fitting spring.

NIEMINSKI teaches a wheel drive having a brake which is connected to the drive shaft (30) via an engaging gear (@ 33', Fig. 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the wheel drive of AVITAN such that a brake would be connected to the drive shaft via an engaging gear in view of NIEMINSKI to provide a reliable means for stopping, slowing down, and holding a position of the vehicle to which the drive wheel is affixed.

Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over **AVITAN (US 5,128,598)** in view of **NIEMINSKI et al (US4,513,839)** as applied to claims 11, 15 and 20 above, and further in view of **OLDAKOWSKI (US 5,121,018)**.

Regarding **claims 16 and 17**, the combination of AVITAN - NIEMINSKI teaches a wheel drive with a brake.

The combination of AVITAN - NIEMINSKI does not teach the brake engaging via a spring tension and disengages via one of electromagnetic power and hydraulic power. Nor does it teach the spring being a spiral pressure spring.

OLDAKOWSKI teaches a brake which is engaged via a spiral pressure spring (24) and is disengaged via electromagnetic power.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the wheel drive taught by the combination of AVITAN - NIEMINSKI such that the brake would be engaged via a spiral pressure spring and disengaged via electromagnetic power in view of OLDAKOWSKI so that no power would be needed to keep the motor shaft locked in position after the brake is set (OLDAKOWSKI, col. 1, lines 26-31).

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over **AVITAN (US 5,128,598)** in view of **NIEMINSKI et al (US4,513,839)** as applied to claims 11, 15 and 20 above, and further in view of **BURENKOV et al. (US 4,234,809)**.

The combination of AVITAN - NIEMINSKI teaches a wheel drive having a brake.

The combination of AVITAN - NIEMINSKI does not teach the brake being a liquid cooled brake.

BURENKOV teaches a liquid cooled brake.

The combination of AVITAN - NIEMINSKI teaches a wheel drive having a braking system, the BURENKOV reference teaches a liquid cooled brake. Because both teach braking systems, it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute one braking apparatus for the other to achieve the predictable result of stopping the wheel drive.

Allowable Subject Matter

Claims 12-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEREK D. KNIGHT whose telephone number is (571)272-7951. The examiner can normally be reached on Mon - Friday, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on (571) 272-7095. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roger L Pang/
Primary Examiner, Art Unit 3655
/D. D. K./
Examiner, Art Unit 3655